



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,796	12/03/2001	Nadar Fayyaz	T8465086US1	7075

7590 05/13/2004

Gowling Lafleur Henderson LLP  
Suite 4900  
Commerce Court West  
Toronto, ON M5L 1J3  
CANADA

EXAMINER
----------

VANNUCCI, JAMES

ART UNIT	PAPER NUMBER
----------	--------------

2821

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/998,796

Applicant(s)

FAYYAZ, NADAR

Examiner

Jim Vannucci

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8; no antecedent basis for the limitation "the ground plane" in line 6.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Jaquet(5,296,867).

Claim 1, figure 1 discloses a conductive ground plane(1), a conductive radiating plate(2) spaced apart from the ground plane(1) and defining a cavity, an antenna interface terminal(4) in communication with the cavity and being electrically isolated from the ground plane(1) and the radiating plate(2), and a resonant network for determining operating characteristics of the antenna, the resonant network including a

Art Unit: 2821

first inductive element(3) electrically coupled to the interface terminal(4) and the radiating plate(2) and a second inductive element(5) electrically coupled to the interface terminal(4) and the ground plane(1).

Claim 2, the device disclosed in figure 1 includes a ground plane, a radiating plate and a cavity defining a capacitive element, and an inductive element disposed in parallel with the capacitive element(col. 3, lines 17-35).

Claim 3, the inductors(3 & 5) disclosed in figure 1 are disposed within the cavity.

Claim 5, the inductors(3 & 5) disclosed in figure 1 are coiled wire inductors, each said coiled wire inductor including a number of wire turns, and the resonant network provides the antenna with a resonant frequency determined in accordance with the number of wire turns of the coiled wire inductors.

Claim 6, figure 1 discloses the first inductive element(3) being a plurality of inductors each being electrically coupled to the interface terminal(4) and a respective location on the radiating plate(2).

Claim 8, figure 3 discloses a conductive casing(20) for communications hardware and an antenna communications port(8) interfacing with the hardware.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaquet in view of Strickland(5,329,287).

Jaquet does not disclose an arcuate radiating plate.

Claim 4, the inductors disclosed in figure 1 of Jaquet are obviously air-core inductors because they are shown without any material inside of the coils.

Claim 7, figure 3 of Strickland discloses a radiating plate(20) that is arcuate shaped for a desired antenna top load.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a radiating plate as disclosed in Strickland with the antenna disclosed in Jaquet to achieve a desired load for the antenna.

7. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaquet in view of Kanayama(6,434,369).

Jaquet does not disclose a casing that is positioned to define part of a capacitive element.

Claim 9, figure 5 of Kanayama discloses positioning a conductive case(22) above a ground plane(21) such that it capacitively couples with the ground plane(21) and a radiator(30).

Claim 10, positioning a case above a ground plane as disclosed in figure 5 of Kanayama would define a cavity by the case and a radiator.

Claim 11, see claim 4 above.

Claim 12, see claim 5 above.

Claim 13, see claim 6 above.

It would have been obvious to one of ordinary skill in the art at the time of the invention to place the case disclosed in Jaquet on the opposite side of the ground plane as disclosed in Kanayama so that the electronics can be shielded and contained in a smaller space.

8. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaquet in view of Strickland and Kanayama.

Claim 14, most of the radiating plate(20) disclosed in figure 3 of Strickland would be inclined to the casings disclosed in Jaquet and Kanayama if the plate disclosed in Strickland is positioned as a top load to the devices disclosed in Jaquet and Kanayama.

Claim 15, the radiating plate(20) disclosed in figure 3 of Strickland is arcuate.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the top load element disclosed in Strickland with the device disclosed in Jaquet and Kanayama to obtain a desired impedance for the device.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

The limitation in claim 1 concerning the ground plane and radiating plate defining a cavity is read broadly by examiner to include the case where the lower boundary of the cavity is the ground plane and the upper boundary of the cavity is at the lower edge of the radiating plate even though the radiating plane does not constitute the complete upper boundary.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Correspondence***

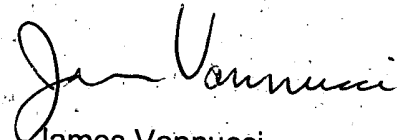
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Vannucci whose phone number is (571) 272-1820.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications only may be submitted

Art Unit: 2821

to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 872-9306.

  
James Vannucci